

§ 27.21

equipped with a safety belt and shoulder harness that meets the requirements of paragraphs (a), (b), and (c) of this section.

(1) Each occupant's seat must have a combined safety belt and shoulder harness with a single-point release. Each pilot's combined safety belt and shoulder harness must allow each pilot, when seated with safety belt and shoulder harness fastened, to perform all functions necessary for flight operations. There must be a means to secure belts and harnesses, when not in use, to prevent interference with the operation of the rotorcraft and with rapid egress in an emergency.

(2) Each occupant must be protected from serious head injury by a safety belt plus a shoulder harness that will prevent the head from contacting any injurious object.

(3) The safety belt and shoulder harness must meet the static and dynamic strength requirements, if applicable, specified by the rotorcraft type certification basis.

(4) For purposes of this section, the date of manufacture is either—

(i) The date the inspection acceptance records, or equivalent, reflect that the rotorcraft is complete and meets the FAA-Approved Type Design Data; or

(ii) The date the foreign civil airworthiness authority certifies that the rotorcraft is complete and issues an original standard airworthiness certificate, or equivalent, in that country.

(b) For rotorcraft with a certification basis established prior to October 18, 1999—

(1) The maximum passenger seat capacity may be increased to eight or nine provided the applicant shows compliance with all the airworthiness requirements of this part in effect on October 18, 1999.

(2) The maximum weight may be increased to greater than 6,000 pounds provided—

(i) The number of passenger seats is not increased above the maximum number certificated on October 18, 1999, or

(ii) The applicant shows compliance with all of the airworthiness require-

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ments of this part in effect on October 18, 1999.

[Doc. No. 26078, 56 FR 41051, Aug. 16, 1991, as amended by Amdt. 27–37, 64 FR 45094, Aug. 18, 1999]

Subpart B—Flight

GENERAL

§ 27.21 Proof of compliance.

Each requirement of this subpart must be met at each appropriate combination of weight and center of gravity within the range of loading conditions for which certification is requested. This must be shown—

(a) By tests upon a rotorcraft of the type for which certification is requested, or by calculations based on, and equal in accuracy to, the results of testing; and

(b) By systematic investigation of each required combination of weight and center of gravity if compliance cannot be reasonably inferred from combinations investigated.

[Doc. No. 5074, 29 FR 15695, Nov. 24, 1964, as amended by Amdt. 27–21, 49 FR 44432, Nov. 6, 1984]

§ 27.25 Weight limits.

(a) *Maximum weight.* The maximum weight (the highest weight at which compliance with each applicable requirement of this part is shown) must be established so that it is—

(1) Not more than—

(i) The highest weight selected by the applicant;

(ii) The design maximum (the highest weight at which compliance with each applicable structural loading condition of this part is shown); or

(iii) The highest weight at which compliance with each applicable flight requirement of this part is shown; and

(2) Not less than the sum of—

(i) The empty weight determined under § 27.29; and

(ii) The weight of usable fuel appropriate to the intended operation with full payload;

(iii) The weight of full oil capacity; and

(iv) For each seat, an occupant weight of 170 pounds or any lower weight for which certification is requested.